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Automobile Insurance Losses
Personal Injury Protection and Collision Coverages

THE EFFECTS OF CAR SIZE ON CRASH LOSSES 1977-1980 MODELS

Research Report HLDI A-13
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Summary

This Highway Loss Data Institute (HLDI) report presents relationships between car size and body style and insurance losses. Results are presented for Personal Injury Protection coverages for 1977-1979 model year passenger cars and for Collision coverages involving 1978-1980 model year cars.

Principal Findings:

Personal Injury Protection

- The frequencies of injury claims with medical payments exceeding various dollar thresholds were strongly influenced by car size; the smallest cars had the worst injury loss experience.

- Sports and specialty models had consistently higher frequencies of injury claims than two-door and four-door models of the same size.

Collision

- Small subcompact and subcompact models had above average collision losses, as did full-size luxury cars. Compact and intermediate models had lower than average results.

- Sports and specialty models had the highest collision losses in all car size groups. Two-door models consistently had higher losses than four-door models of the same size.

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Introduction

The Highway Loss Data Institute (HLDI) is a non-profit, public service organization that gathers, processes, and publishes insurance data concerned with human and economic losses associated with motor vehicle use, and especially with the ways such losses vary among different kinds of vehicles.

Since 1977, HLDI reports have classified individual passenger cars into four size groups – subcompact, compact, intermediate, and full size – defined by their wheelbases. Within each size group the cars were additionally classified by body style – regular two-door models, regular four-door models, station wagons, and sports or specialty models (see Appendix A for definitions). The purpose of this classification was two-fold: first, since it has been repeatedly documented that the chance of death or injury to vehicle occupants is strongly related to the size of the car, the HLDI classification provides a basic separation of cars into different injury risk categories; and second, defining groups of cars with similar sizes and body styles facilitates comparisons of the loss experience of cars with similar characteristics that are likely to be competing with each other in the market place.

In the last few model years there has been a dramatic shift in numbers of small cars being sold. For example, as recently as the 1977 model year, intermediate and full size cars accounted for 69 percent of the overall Collision coverage exposure (58 percent for intermediates, and 11 percent for full size cars), and subcompacts and compacts accounted for 31 percent (13 percent and 18 percent, respectively). By the 1980 model year, this mix had changed to 13 percent for the larger cars, with full size cars, which are all luxury models, accounting for only 1 percent, and 87 percent (50 percent subcompacts and 37 percent compact) for the smaller cars.

For the 1977 model year, 42 of the 108 individual makes and series for which results were published by HLDI were small cars (23 subcompact and 19 compact). By the 1980 model year, this had increased to 85 of the 116 individual makes and series that were reported, and there were only three full size series with sufficient exposure to report.

It seems virtually certain that this trend will continue; the manufacturers' plans call for a continuing emphasis on small cars and a phasing out of the larger cars. In view of this, HLDI starting with this report has begun subdividing each of its two small car groups into two distinct size groups. Thus subcompacts will be classified – on the basis of their wheelbases – as either small subcompacts (wheelbase less than or equal to 96 inches) or subcompacts (wheelbase greater than 96 inches but less than or equal to 101 inches). Compacts, similarly will be divided into small compacts (wheelbase greater than 101 inches but less than or equal to 106 inches) and compacts (wheelbase greater than 106 inches but less than or equal to 111 inches). The other two size groups – intermediate and full- size – will remain unchanged, although it should be recognized that the full- size group has already virtually dissappeared.

The purpose of this report is to present previously published HLDI results for 1977 through 1980 models *using the new size groups*. These results correspond to those previously published in HLDI research reports I79-1 and R80-2 using the four previous wheelbase divisions.

It is intended that the dissemination of this and other HLDI reports will contribute to research into ways for reducing highway damage to people and their property, and also provide the public with information relating to the differences in the crash damage produced by different kinds of vehicles.

Results and Discussion

Injury Coverages

This report presents four separate injury claim frequency results for passenger cars from model years 1977 to 1979. These are the frequency of all claims, both pending and paid, and the frequency of claims with medical payments exceeding $250, $500, and $1,000, respectively. These last three sets of results allow comparisons of the frequency of claims of increasing severities.

Each claim frequency result is presented in relative terms, with 100 representing the result for all cars in *each* claim size category. Thus, comparisons should be made either within a claim size category or by considering sets of claim frequency results. It is important to keep in mind that the *relative* claim frequency results for the different claim size amounts are not directly comparable because each set of relative results is based on a different value of 100.

The actual frequencies of claims decrease rapidly with increasing claim size. The frequency of claims exceeding $250 was approximately one-third the overall frequency, the frequency exceeding $500 was about one-fourth the overall frequency, and the frequency exceeding $1,000 was less than one-sixth the overall frequency. On the other hand, the total dollars paid out were dramatically influenced by the more expensive claims. Claims exceeding $500, although only one-fourth of all claims, accounted for over 85 percent of the total dollars paid out, and claims exceeding $1,000, although less than one-sixth of all claims, accounted for three-quarters of the dollars paid out.

Table 1 summarizes the injury loss experience of the 1977 through 1979 model year passenger cars by size group and body style subgroup. The exposure thresholds for reporting results were 5,000 insured vehicle years for the "All" results, 10,000 years for the greater than $250 results, 15,000 years for the greater than $500 results, and 25,000 years for the greater than $1,000 results. In cases where the exposure threshold was not achieved, no result is shown.

Figure 1 shows the injury loss experience for the six size groups. From this figure it is apparent that the smallest cars had the worst injury loss experience in all claim size categories and there was a strong inverse relationship between car size and the injury loss experience. From the small subcompacts up to and including the intermediate-sized cars, the injury loss experience improved with increasing car size. Full-sized cars had the lowest overall claim frequency but the results for the larger claim sizes were higher than corresponding results for intermediate-sized cars.

Figure 2 shows the injury loss experience for the regular two-door models. Again it is apparent that the smallest two-door models had the worst injury loss experience and that in general the injury loss experience improved as the car size increased. Figure 3 shows the injury loss experience for the regular four-door models, and it shows a pattern similar to that in Figure 2.

Figure 4 shows the injury loss experience for the sports and specialty models. Again, this shows that the smallest cars had the worst injury loss experience. In addition, when Figure 4 is compared with Figures 2 and 3, it is apparent that sports and specialty models had a consistently worse injury loss experience than regular two- and four-door models of the same size.

Collision Coverages

The HLDI reports which have summarized the Collision coverage loss experience of various groupings of individual models present results based on three categories of loss experience. Claim frequency results measure how often Collision claims are submitted for particular vehicles during a given period of time and

(Cont'd on page 9)

TABLE 1
PERSONAL INJURY PROTECTION COVERAGES
RELATIVE INJURY CLAIM FREQUENCIES BY SIZE OF CLAIM
1977-1979 MODELS

Size* and Body Style	Exposure	Relative Claim Frequencies by Size of Claim			
		All	> $250	> $500	> $1,000
ALL (Claims per 1,000 insured vehicle years)	5,674,895	100 (=18.2)	100 (=6.8)	100 (=4.5)	100 (=2.7)
Small Subcompact	**882,947**	**127**	**125**	**122**	**120**
Regular two-door	721,777	129	126	123	120
Regular four-door	16,376	121	130	122	
Station wagon	94,039	112	109	104	106
Sports	50,755	126	141	141	144
Subcompact	**635,471**	**116**	**113**	**111**	**108**
Regular two-door	416,202	121	116	113	108
Regular four-door	123,383	117	110	112	112
Station wagon	70,939	96	97	91	93
Sports	24,947	95	118	120	
Small Compact	**177,698**	**110**	**105**	**104**	**100**
Regular two-door	77,868	122	116	113	106
Regular four-door	50,804	106	103	107	116
Station wagon	43,732	94	87	83	73
Specialty	5,294	109			
Compact	**1,359,963**	**101**	**99**	**99**	**100**
Regular two-door	588,525	100	98	98	98
Regular four-door	333,845	94	92	90	92
Station wagon	74,619	85	77	79	74
Specialty	362,974	113	113	115	116
Intermediate	**2,151,859**	**85**	**87**	**87**	**89**
Regular two-door	575,082	87	90	91	94
Regular four-door	737,302	78	78	77	79
Station wagon	294,352	76	70	71	73
Specialty	544,624	97	103	104	104
Full-Size	**466,957**	**81**	**93**	**97**	**101**
Regular two-door	71,976	89	94	98	104
Regular four-door	137,426	79	87	86	92
Station wagon	39,185	76	76	81	79
Specialty	218,370	80	100	107	111

*** CAR SIZE DEFINITION**

Small Subcompact – Cars with wheelbases less than or equal to 96 inches.
Subcompact – Cars with wheelbases greater than 96 inches and less than or equal to 101 inches.
Small Compact – Cars with wheelbases greater than 101 inches and less than or equal to 106 inches.
Compact – Cars with wheelbases greater than 106 inches and less than or equal to 111 inches.
Intermediate – Cars with wheelbases greater than 111 inches and less than or equal to 120 inches.
Full-Size – Cars with wheelbases greater than 120 inches.

Figure 1

Personal Injury Protection Coverages
Relative Injury Claim Frequencies by Size of Claim
1977-1979 Models

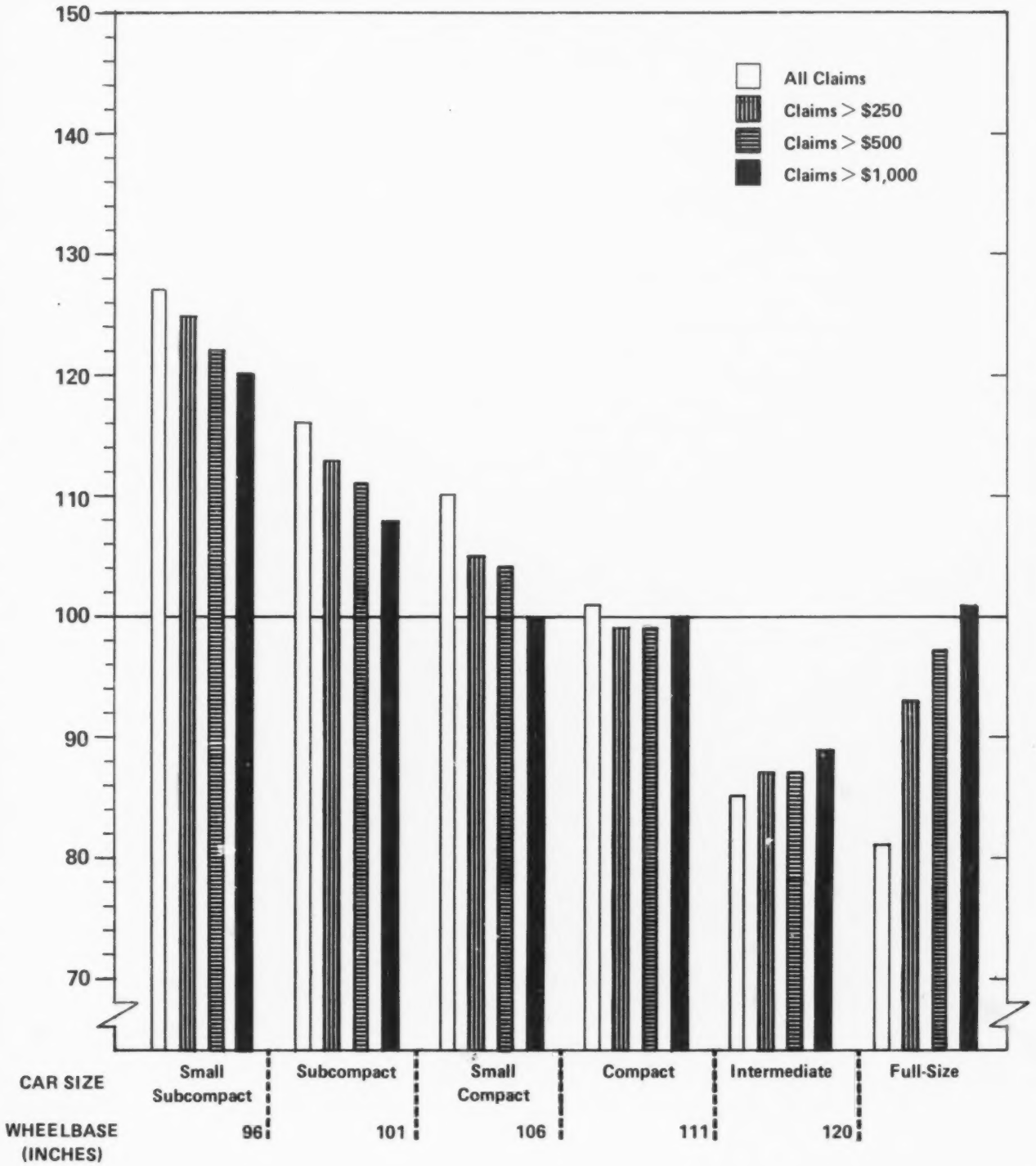


Figure 2

Personal Injury Protection Coverages
Relative Injury Claim Frequencies by Size of Claim
1977-1979 Regular Two-Door Models

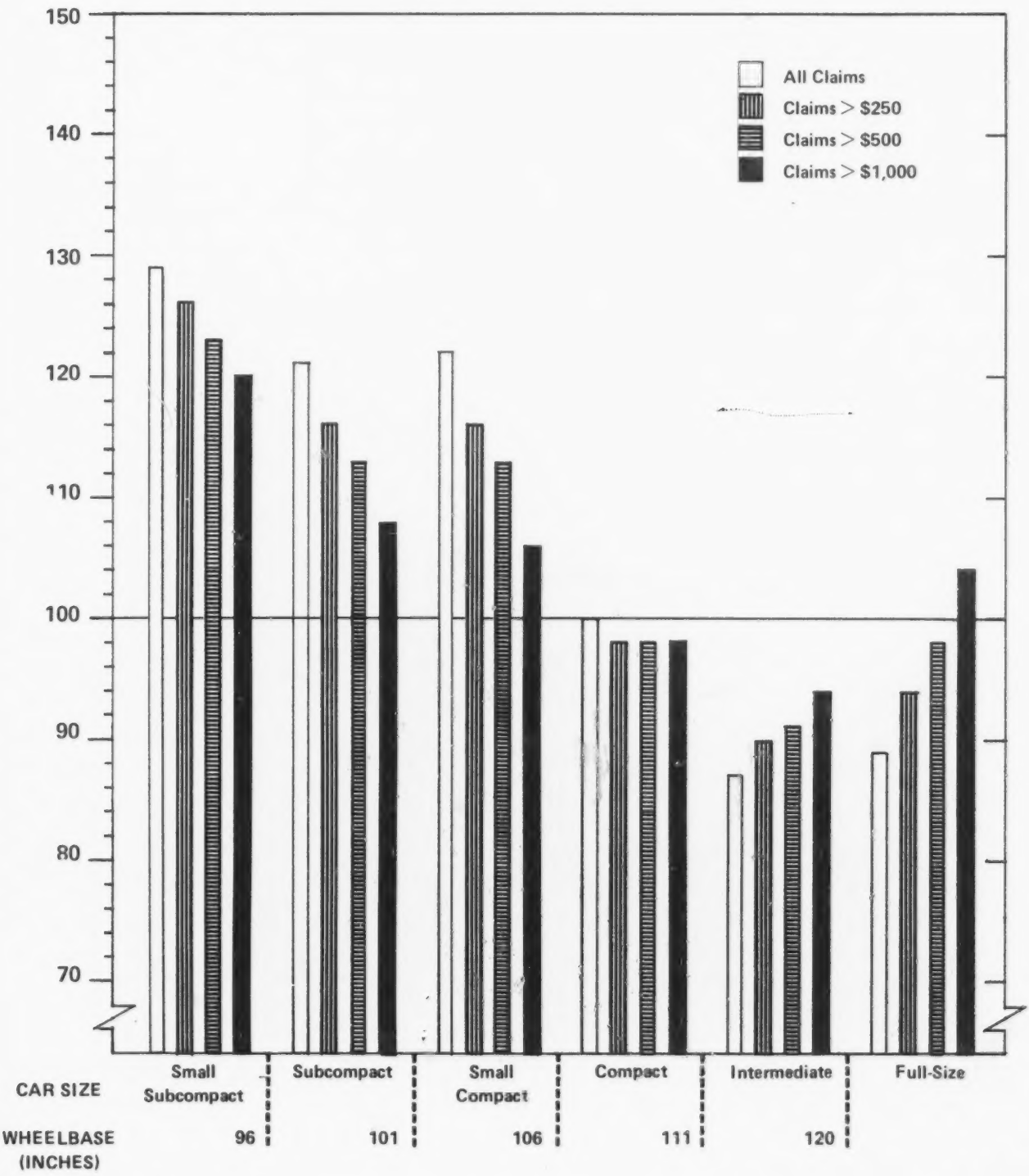


Figure 3

Personal Injury Protection Coverages
Relative Injury Claim Frequencies by Size of Claim
1977-1979 Regular Four-Door Models

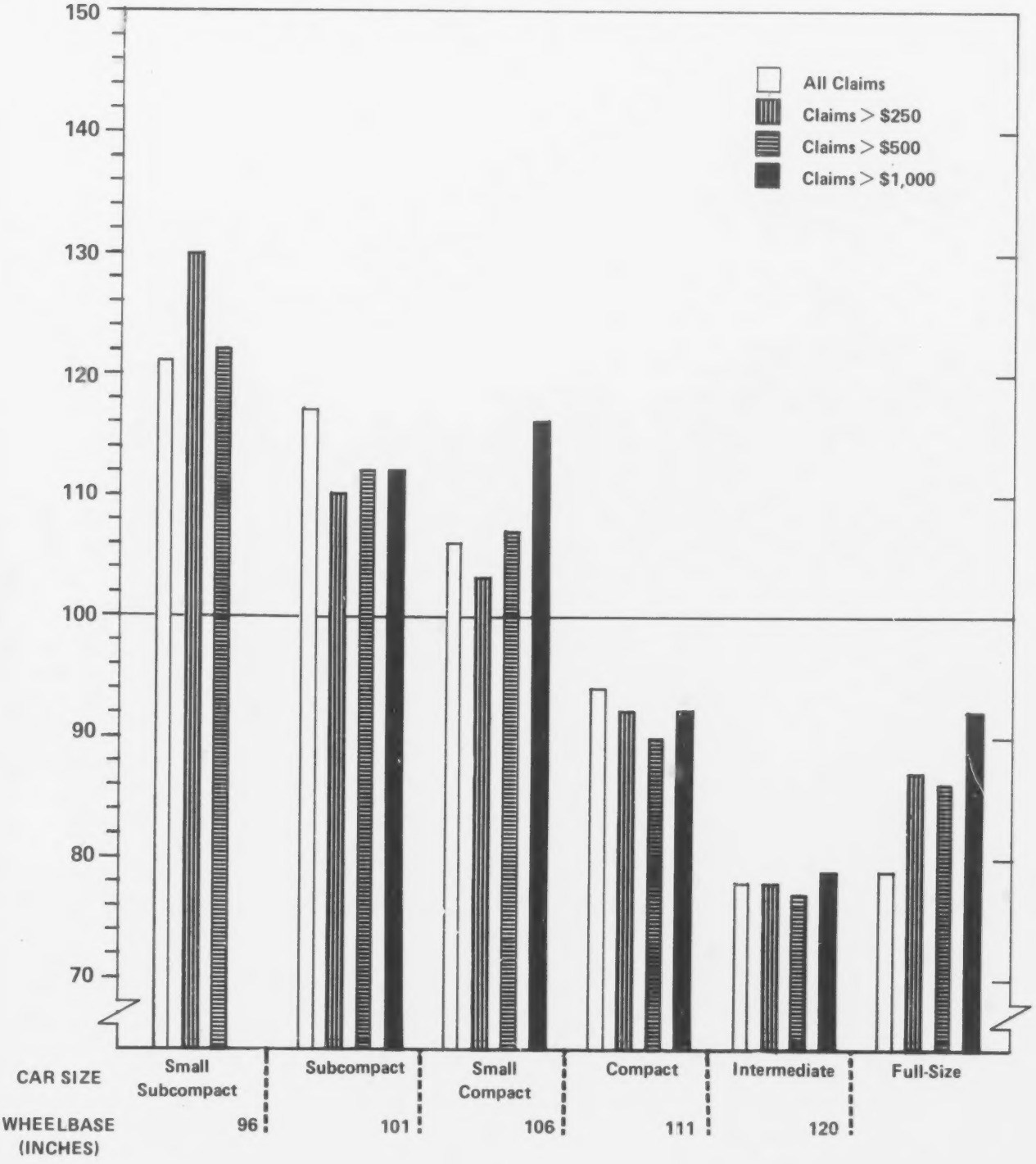
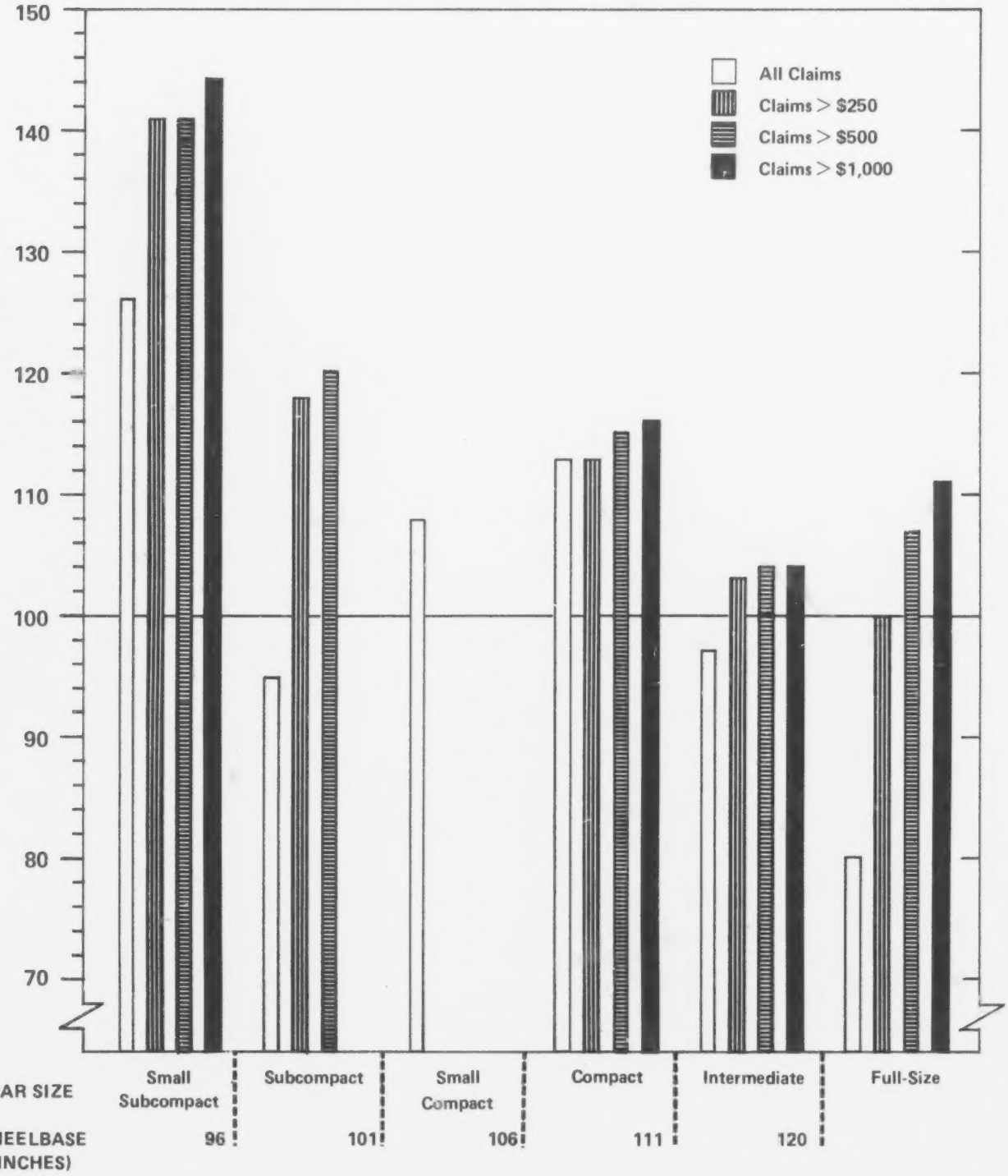


Figure 4

Personal Injury Protection Coverages
Relative Injury Claim Frequencies by Size of Claim
1977-1979 Sports and Specialty Models



are generally expressed as number of claims per 100 years of exposure. Average loss payment per claim results measure how serious, on average, the crashes are in terms of the cost involved in repairing the damage. The third category of loss is a combination of the first two and is the average loss payment per insured vehicle year. This is considered to be the most relevant single result in the assessment of Collision coverage loss experience because it accounts for both the frequency and the severity of crashes resulting in Collision coverage claims.

Table 2 summarizes the collision coverage experience of 1978 through 1980 model year passenger cars by size group and body style subgroup. Shown in Table 2 for the three model years are the relative claim frequencies, relative average loss payments per claim, and relative average loss payments per insured vehicle year. The value 100 corresponds to the all-vehicle result in each loss category for each model year. In those cases where the exposure was less than 1,000 insured vehicle years, no result is given.

Figure 5 presents the Collision coverage results for the three model years by the six car size groups. The two subcompact size classes and the full-size class had the highest relative average loss payments per insured vehicle year, and the compacts and intermediates had below average Collision coverage loss experience. The dramatic decline in the results for 1980 small compacts is a result of the introduction of the 1980 GM "X-body" cars, which have results that are better than average for their size group. The significant increase in the results for 1979 and 1980 model full-size cars is primarily the result of Ford and Chrysler models being reduced in size leaving only luxury cars produced by Cadillac and Lincoln in the full-size group beginning with the 1979 models.

Figure 6 shows the relative average loss payments per insured vehicle year for 1980 regular four-door models, regular two-door models, and sports or specialty models by car size group. (Note: the 1980 small compacts had *no* specialty models and the full-size group had *only* specialty models.) Figure 6 shows very pronounced relationships between the Collision coverage loss experience and body style – in all size classes, two-door models had higher collision losses than four-door models and sports or specialty models had even higher losses. The sports models in the subcompact classes had particularly bad Collision coverage loss experience. Table 2 shows that these same body style relationships existed for the 1978 and 1979 models.

TABLE 2

COLLISION COVERAGES
RELATIVE AVERAGE LOSSES – 1978-1980 MODELS

Size† and Body Style	1978 Models			1979 Models			1980 Models		
	A*	B*	C*	A*	B*	C*	A*	B*	C*
ALL	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Small Subcompact	**108**	**107**	**116**	**106**	**105**	**111**	**106**	**101**	**107**
Regular two-door	108	104	112	104	101	105	104	99	103
Regular four-door	110	91	100	97	105	101	106	87	93
Station Wagon	91	100	91	88	95	83	84	91	77
Sports	140	149	208	151	139	208	166	132	219
Subcompact	**103**	**107**	**110**	**106**	**110**	**116**	**109**	**106**	**117**
Regular two-door	114	106	120	114	110	125	120	106	127
Regular four-door	88	98	86	87	96	83	81	95	77
Station Wagon	95	102	96	97	104	100	79	94	74
Sports	100	197	197	118	177	209	132	211	278
Small Compact	**93**	**104**	**96**	**96**	**100**	**96**	**85**	**92**	**78**
Regular two-door	96	103	98	103	102	105	90	94	84
Regular four-door	95	104	98	98	101	98	82	89	73
Station Wagon	79	101	80	76	94	71	85	90	77
Specialty	144	139	201						
Compact	**101**	**97**	**98**	**102**	**94**	**96**	**97**	**97**	**94**
Regular two-door	97	95	92	98	91	89	96	93	89
Regular four-door	84	88	73	82	85	69	76	87	66
Station Wagon	79	93	73	76	88	66	65	86	56
Specialty	122	104	127	122	102	124	115	106	122
Intermediate	**91**	**95**	**86**	**88**	**93**	**82**	**89**	**100**	**89**
Regular two-door	91	95	87	87	92	79	89	101	90
Regular four-door	80	89	71	79	87	68	81	91	74
Station Wagon	82	88	72	84	85	71	83	77	64
Specialty	107	104	111	107	106	113	102	117	119
Full-Size	**101**	**98**	**99**	**103**	**109**	**112**	**100**	**114**	**114**
Regular two-door	102	88	89						
Regular four-door	91	85	77						
Station Wagon	106	83	88						
Specialty	106	112	118	103	109	112	100	114	114

***A – Relative Claim Frequency**
***B – Relative Average Loss Payment Per Claim**
***C – Relative Average Loss Payment Per Insured Vehicle Year**

† CAR SIZE DEFINITION

Small Subcompact – Cars with wheelbases less than or equal to 96 inches.
Subcompact – Cars with wheelbases greater than 96 inches and less than or equal to 101 inches.
Small Compact – Cars with wheelbases greater than 101 inches and less than or equal to 106 inches.
Compact – Cars with wheelbases greater than 106 inches and less than or equal to 111 inches.
Intermediate – Cars with wheelbases greater than 111 inches and less than or equal to 120 inches.
Full-Size – Cars with wheelbases greater than 120 inches.

Figure 5

Collision Coverages
Relative Average Loss Payments Per Insured Vehicle Year
1978-1980 Models

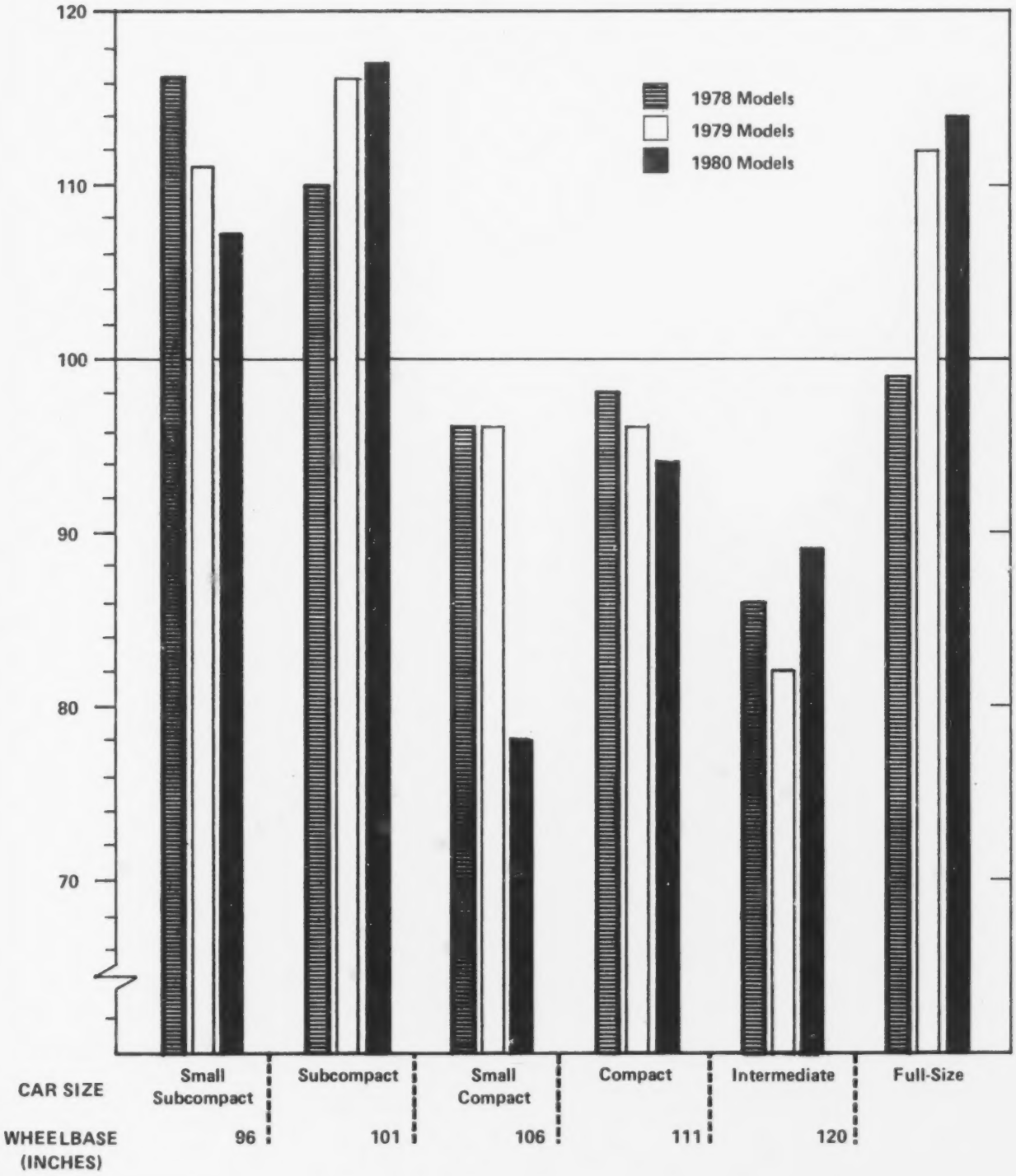
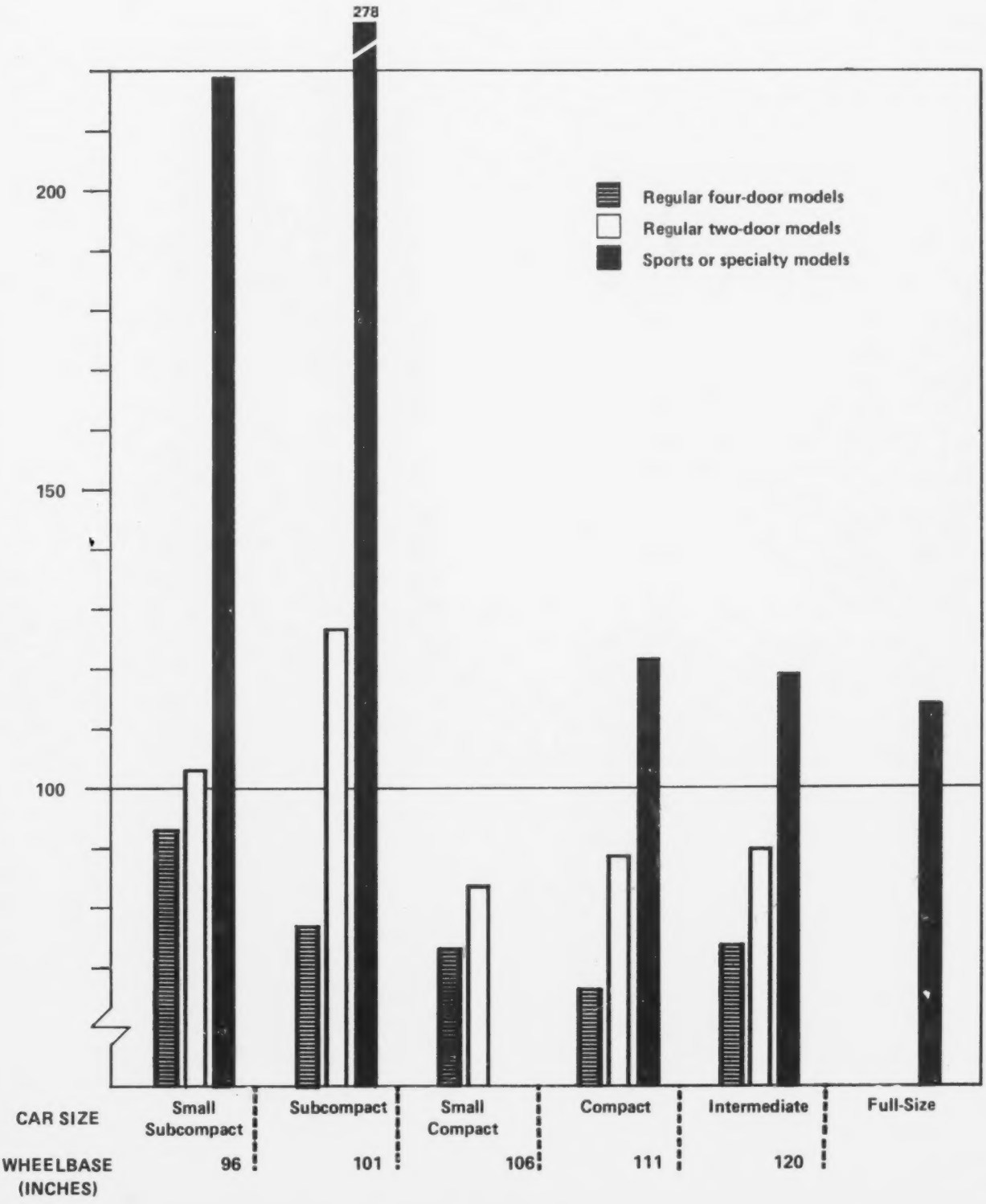


Figure 6

Collision Coverages
Relative Average Loss Payments Per Insured Vehicle Year
1980 Models



Appendix A

Vehicle Size Class Designations

Vehicle Size Class Designations

MAKE	CAR SIZE	SERIES	BODY STYLE(S)	WHEELBASE	YEARS INVOLVED
AMERICAN	SMALL SUBCOMPACT	AMX	2D	96.0	79-80
		GREMLIN	2D	96.0	77-78
		SPIRIT	2D	96.0	79-80
	SUBCOMPACT	PACER	2D/SW	100.0	77-80
	COMPACT	AMX	SPEC	108.0	78
		CONCORD	2D/4D/SW	108.0	78-80
		EAGLE	2D/4D/SW	109.0	80
		HORNET	2D/4D/SW	108.0	77
	INTERMEDIATE	MATADOR	2D	114.0	77-78
		MATADOR	4D/SW	118.0	77-78
AUDI	SUBCOMPACT	FOX	2D/4D/SW	97.2	77-79
		4000	2D/4D	99.8	80
	SMALL COMPACT	100LS	2D/4D	105.3	77
		5000	4D	105.5	78-80
BUICK	SUBCOMPACT	SKYHAWK	2D	97.0	77-80
	SMALL COMPACT	SKYLARK	2D/4D	104.9	80
	COMPACT	CENTURY/REGAL	2D	108.1	78-80
		CENTURY	4D/SW	108.1	78-80
		SKYLARK	2D/4D	111.0	77-79
	INTERMEDIATE	CENTURY	2D	112.0	77
		CENTURY	4D/SW	116.0	77
		ELECTRA	2D/4D	118.9	77-80
		ESTATE	SW	115.9	77-80
		LESABRE	2D/4D	115.9	77-80
		RIVIERA	SPEC	115.9	77-78
		RIVIERA	SPEC	114.0	79-80
CADILLAC	INTERMEDIATE	ELDORADO	SPEC	114.0	79-80
		SEVILLE	SPEC	114.3	77-80
	FULL-SIZE	BROUGHAM 2D/4D	SPEC	121.5	80
		DE VILLE 2D/4D	SPEC	121.5	77-80
		ELDORADO	SPEC	126.3	77-78
		FLEETWOOD BROUGHAM	SPEC	121.5	77-79
		FLEETWOOD LIMOUSINE	SPEC	144.5	77-80

MAKE	CAR SIZE	SERIES	BODY STYLE(S)	WHEELBASE	YEARS INVOLVED
CHEVROLET	SMALL SUBCOMPACT	CHEVETTE	2D	94.3	77-80
	SUBCOMPACT	CHEVETTE	4D	97.3	78-80
		CORVETTE	SPORTS	98.0	77-80
		MONZA	2D	97.0	77-80
		MONZA	SW	97.0	78-79
		VEGA	2D/SW	97.0	77
	SMALL COMPACT	CITATION	2D/4D	104.9	80
	COMPACT	CAMARO	SPEC	108.0	77-80
		MALIBU	2D/4D/SW	108.1	78-80
		MONTE CARLO	SPEC	108.1	78-80
		NOVA	2D/4D	111.0	77-79
	INTERMEDIATE	CAPRICE	2D/4D/SW	116.0	77-80
		CHEVELLE	2D	112.0	77
		CHEVELLE	4D/SW	116.0	77
		IMPALA	2D/4D/SW	116.0	77-80
		MONTE CARLO	SPEC	116.0	77
CHRYSLER	COMPACT	LE BARON	2D	108.7	80
	INTERMEDIATE	CORDOBA	SPEC	115.0	77-79
		CORDOBA	SPEC	112.7	80
		LE BARON	2D	112.7	77-79
		LE BARON	4D	112.7	77-80
		LE BARON	SW	112.7	78-80
		NEW YORKER	4D	118.5	79-80
		NEWPORT	4D	118.5	79-80
	FULL-SIZE	NEW YORKER	2D/4D	124.0	77-78
		NEWPORT	2D/4D	124.0	77-78
		TOWN & COUNTRY	2D/4D/SW	124.0	77
DATSUN	SMALL SUBCOMPACT	B210	2D/4D	92.1	77-78
		F-10	2D/SW	94.3	77-78
		200SX	2D	92.1	77-79
		200SX	2D	94.5	80
		210	2D/4D/SW	92.1	79-80
		280Z	SPORTS	90.7	77-78
		280ZX	SPORTS	91.3	79-80
		310	2D	94.3	79-80
		310	4D	94.3	80
		510	2D/4D/SW	94.5	78-80
	SUBCOMPACT	280ZX 2+2	SPORTS	99.2	79-80
		610	2D/4D	98.4	77
		710	2D/4D	96.5	77
	SMALL COMPACT	280Z 2+2	SPEC	102.6	77-78
		810	4D/SW	104.3	77-78
		810	2D/4D/SW	104.3	79-80

MAKE	CAR SIZE	SERIES	BODY STYLE(S)	WHEELBASE	YEARS INVOLVED
DODGE	SMALL SUBCOMPACT	COLT	2D/4D	92.1	77-79
		COLT (FWD)	2D	90.6	79-80
		COLT	SW	95.3	77
		COLT HARDTOP	2D	95.3	77
	SUBCOMPACT	CHALLENGER	2D	99.0	78-80
		COLT	SW	99.0	78-80
		OMNI	4D	99.2	78-80
		OMNI	2D	96.7	79-80
	COMPACT	ASPEN	2D	108.7	77-80
		DIPLOMAT	2D	108.7	80
	INTERMEDIATE	ASPEN	4D/SW	112.7	77-80
		CHARGER	SPEC	115.0	77-78
		DIPLOMAT	2D	112.7	77-79
		DIPLOMAT	4D	112.7	77-80
		DIPLOMAT	SW	112.7	78-80
		MAGNUM XE	SPEC	114.9	79
		MIRADA	SPEC	112.7	80
		MONACO	2D	115.0	77-78
		MONACO	4D/SW	117.5	77-78
		ST. REGIS	4D	118.5	79-80
	FULL-SIZE	ROYAL MONACO	2D/4D	121.4	77
		ROYAL MONACO	SW	124.0	77
FIAT	SMALL SUBCOMPACT	SPIDER	SPORTS	89.7	77-80
		X 1/9	SPORTS	86.7	77-80
		128	2D	87.5	77-79
	SUBCOMPACT	BRAVA/131	2D/4D	98.0	77-80
		BRAVA/131	SW	98.0	77-79
		STRADA	2D/4D	96.4	79-80
		128	4D	96.4	77-79
		128	SW	96.4	77

MAKE	CAR SIZE	SERIES	BODY STYLE(S)	WHEELBASE	YEARS INVOLVED
FORD	SMALL SUBCOMPACT	FIESTA	2D	90.0	78-80
		PINTO	2D	94.5	77-80
		PINTO	SW	94.8	77-80
	SUBCOMPACT	MUSTANG	2D	100.4	79-80
		MUSTANG II	2D	96.2	77-78
	SMALL COMPACT	FAIRMONT	2D/4D/SW	105.5	78-80
		MAVERICK	2D	103.0	77
	COMPACT	GRANADA	2D/4D	109.9	77-80
		MAVERICK	4D	109.9	77
		THUNDERBIRD	SPEC	108.4	80
	INTERMEDIATE	LTD	2D/4D/SW	114.4	79-80
		LTD II	2D	114.0	77-79
		LTD II	4D	118.0	77-79
		LTD II	SW	118.0	77
		THUNDERBIRD	SPEC	114.0	77-79
	FULL-SIZE	LTD	2D/4D/SW	121.0	77-78
HONDA	SMALL SUBCOMPACT	ACCORD	2D	93.7	77-80
		ACCORD	4D	93.7	79-80
		CIVIC	2D	86.6	77-79
		CIVIC	2D	88.6	80
		CIVIC	SW	89.8	77-79
		CIVIC	SW	91.3	80
		PRELUDE	2D	91.3	79-80
LINCOLN	COMPACT	VERSAILLES	SPEC	109.9	77-80
	INTERMEDIATE	CONTINENTAL 2D/4D	SPEC	117.3	80
		MARK VI 2D	SPEC	114.3	80
		MARK VI 4D	SPEC	117.3	80
	FULL-SIZE	CONTINENTAL 2D/4D	SPEC	127.2	77-79
		MARK V	SPEC	120.4	77-79
MAZDA	SMALL SUBCOMPACT	GLC	2D/4D	91.0	77-80
		GLC	SW	91.0	79-80
		RX-3	2D	91.0	77-78
		RX7	SPORTS	95.0	79-80
		808/1300	2D/4D/SW	91.0	77
		808/1600	2D/4D/SW	91.0	77
	SUBCOMPACT	COSMO	2D	99.0	77-78
		RX-4	4D/SW	99.0	77-78
		626	2D/4D	99.0	79-80

MAKE	CAR SIZE	SERIES	BODY STYLE(S)	WHEELBASE	YEARS INVOLVED
MERCURY	SMALL SUBCOMPACT	BOBCAT	2D	94.5	77-80
		BOBCAT	SW	94.8	77-80
	SUBCOMPACT	CAPRI	2D	100.9	77
		CAPRI	2D	100.4	79-80
	SMALL COMPACT	COMET	2D	103.0	77
		ZEPHYR	2D/4D/SW	105.5	78-80
	COMPACT	COMET	4D	109.9	77
		COUGAR XR-7	SPEC	108.0	80
		MONARCH	2D/4D	109.9	77-80
	INTERMEDIATE	COUGAR	2D	114.0	77-79
		COUGAR	4D/SW	118.0	77
		COUGAR	4D	114.0	78-79
		COUGAR XR-7	SPEC	114.0	77-79
		MARQUIS	2D/4D/SW	114.4	79-80
	FULL-SIZE	MARQUIS	2D/4D	124.0	77-78
		MARQUIS	SW	121.0	77
		MARQUIS	SW	124.0	78
MG	SMALL SUBCOMPACT	MG MIDGET	SPORTS	80.0	77-79
		MGB	SPORTS	91.1	77-80
OLDSMOBILE	SUBCOMPACT	STARFIRE	2D	97.0	77-80
	SMALL COMPACT	OMEGA	2D/4D	105.0	80
	COMPACT	CUTLASS	2D/4D/SW	108.1	78-80
		OMEGA	2D/4D	111.0	77-79
	INTERMEDIATE	CUSTOM CRUISER	SW	116.0	77,79-80
		CUSTOM CRUISER	SW	119.0	78
		CUTLASS	2D	112.0	77
		CUTLASS	4D/SW	116.0	77
		DELTA 88	2D/4D	116.0	77-80
		NINETY EIGHT	2D/4D	119.0	77-80
		TORONADO	SPEC	114.0	79-80
	FULL-SIZE	TORONADO	SPEC	122.0	77-78
OPEL	SMALL SUBCOMPACT	COUPE	2D	94.3	77-79
		SEDAN	4D	94.3	77-79

MAKE	CAR SIZE	SERIES	BODY STYLE(S)	WHEELBASE	YEARS INVOLVED
PLYMOUTH	SMALL SUBCOMPACT	ARROW	2D	92.1	77-80
		CHAMP	2D	90.6	79-80
	SUBCOMPACT	HORIZON	2D	96.7	79-80
		HORIZON	4D	99.2	78-80
		SAPPORO	2D	99.0	78-80
	COMPACT	VOLARE	2D	108.7	77-80
	INTERMEDIATE	FURY	2D	115.0	77-78
		FURY	4D/SW	117.5	77-78
		GRAN FURY	4D	118.5	80
		VOLARE	4D/SW	112.7	77-80
	FULL-SIZE	GRAN FURY	2D/4D	121.4	77
		GRAN FURY	SW	124.0	77
PONTIAC	SUBCOMPACT	ASTRE	2D/SW	97.0	77
		SUNBIRD	2D	97.0	77-80
		SUNBIRD	SW	97.0	78-79
	SMALL COMPACT	PHOENIX	2D/4D	104.9	80
	COMPACT	FIREBIRD	SPEC	108.1	77-80
		GRAND AM	2D	108.1	78-80
		GRAND AM	4D	108.1	78-79
		GRAND PRIX	SPEC	108.1	78-80
		LEMANS	2D/4D/SW	108.1	78-80
		PHOENIX	2D/4D	111.1*	77-79
		VENTURA	2D/4D	111.1*	77
	INTERMEDIATE	BONNEVILLE	2D/4D/SW	116.0	77-80
		CATALINA	2D/4D/SW	116.0	77-80
		GRAND PRIX	SPEC	116.0	77
		LEMANS	2D	112.0	77
		LEMANS	4D/SW	116.0	77
PORSCHE	SMALL SUBCOMPACT	911 COUPE	SPORTS	89.4	77-80
		924 COUPE	SPORTS	94.5	77-80
	SUBCOMPACT	928 COUPE	SPORTS	98.4	78-80

*THESE VEHICLES ARE CLASSIFIED AS COMPACT EVEN THOUGH THE ACTUAL WHEELBASES ARE 111.1 INCHES. THE BASIC VEHICLE IS THE SAME AS THE CHEVROLET NOVA, OLDSMOBILE OMEGA, AND BUICK SKYLARK, ALL WITH WHEELBASES OF 111.0 INCHES.

MAKE	CAR SIZE	SERIES	BODY STYLE(S)	WHEELBASE	YEARS INVOLVED
SUBARU	SUBCOMPACT	DL	2D/4D/SW	96.9	77-79
		GF	2D	96.9	77-79
		STANDARD	2D	96.9	77-79
TOYOTA	SMALL SUBCOMPACT	COROLLA	2D/4D/SW	93.3	77-79
		COROLLA	2D/4D	94.5	80
	SUBCOMPACT	CELICA	2D	98.3	77-80
		COROLLA TERCEL	2D	98.4	80
		CORONA	2D/4D/SW	98.4	77-78
		CORONA	4D/SW	99.4	79-80
	SMALL COMPACT	CELICA SUPRA	2D	103.5	79-80
		CRESSIDA	4D/SW	104.1	78-80
VOLKSWAGEN	SMALL SUBCOMPACT	BEETLE	2D	94.5	77
		BEETLE CONVERTIBLE	2D	94.5	78-79
		JETTA	2D/4D	94.4	80
		RABBIT CONVERTIBLE	2D	94.5	80
		RABBIT	2D/4D	94.5	77-80
		SCIROCCO	2D	94.5	77-80
	SUBCOMPACT	DASHER	2D/4D/SW	97.2	77-80

List of Publications

Other research reports published by the Highway Loss Data Institute are:

R72-1 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1972 Models,* June 1973.

R73-1 *Automobile Insurance Losses, Collision Coverages; Initial Results for 1973 Models Compared with 1972 Models,* September 1973.

R73-2 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1973 Models,* March 1974.

R73-3 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1973 Models During Their First Two Years,* December 1974.

R73-4 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1973 Models During Their First Three Years,* December 1975.

R74-1 *Automobile Insurance Losses, Collision Coverages; Initial Results for 1974 Models,* May 1974.

R74-2 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1974 Models During Their First Year,* December 1974.

R74-3 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1974 Models During Their First Two Years,* December 1975.

R75-1 *Automobile Insurance Losses, Collision Coverages; Initial Results for 1975 Models,* July 1975.

R75-2 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1975 Models During Their First Year,* December 1975.

R76-1 *Automobile Insurance Losses, Collision Coverages; Initial Results for 1976 Models,* June 1976.

R76-2 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1976 Models During Their First Year, 1975 Models During Their First Two Years, 1974 Models During Their First Three Years,* December 1976.

R77-1 *Automobile Insurance Losses, Collision Coverages; Initial Results for 1977 Models,* June 1977.

R77-2 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1977 Models During Their First Year, 1976 Models During Their First Two Years, 1975 Models During Their First Three Years,* December 1977.

R78-1 *Automobile Insurance Losses, Collision Coverages; Initial Results for 1978 Models,* June 1978.

R78-2 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1978 Models During Their First Year, 1977 Models During Their First Two Years, 1976 Models During Their First Three Years,* January 1979.

R79-1 *Automobile Insurance Losses, Collision Coverages; Initial Results for 1979 Models,* June 1979.

R79-2 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1979 Models During Their First Year, 1978 Models During Their First Two Years, 1977 Models During Their First Three Years,* December 1979.

R80-1 *Automobile Insurance Losses, Collision Coverages; Initial Results for 1980 Models,* June 1980.

R80-2 *Automobile Insurance Losses, Collision Coverages; Variations by Make and Series, 1980 Models During Their First Year, 1979 Models During Their First Two Years, 1978 Models During Their First Three Years,* December 1980.

V78-1 *Automobile Insurance Losses, Non-Commercial Collision Coverages; Variations by Make and Series, Vans, Pickups and Utility Vehicles, 1978 Models During Their First Year, 1977 Models During Their First Two Years,* February 1979.

V79-1 *Automobile Insurance Losses, Non-Commercial Collision Coverages; Variations by Make and Series, Vans, Pickups and Utility Vehicles, 1979 Models During Their First Year, 1978 Models During Their First Two Years,* April 1980.

V79-2 *Automobile Insurance Losses, Personal Injury Protection Coverages; Claim Frequency Results by Size of Claim for 1977, 1978, and 1979 Vans, Pickup Trucks, and Utility Vehicles,* October 1980.

V79-3 *Insurance Theft Losses; Vans, Pickups, and Utility Vehicles, 1979 Models.* May 1981.

V80-1 *Automobile Insurance Losses, Non-Commercial Collision Coverages; Variations by Make and Series, Vans, Pickups, and Utility Vehicles, 1980 Models During Their First Year, 1979 Models During Their First Two Years, 1978 Models During Their First Three Years,* December 1980.

I 75-1 *Automobile Insurance Losses, Injury Coverages; Claim Frequency Results for 1974 and 1975 Models,* June 1976.

I 75-2 *Automobile Insurance Loss[illegible]centage of Collision Claims with Associated Injury Claims for 1974 and 1975 Models,* Mar[illegible]7.

I 76-1 *Automobile Insurance Losses, Injury Coverages; Claim Frequency Results for 1974, 1975, and 1976 Models,* November 1977.

I 76-2 *Automobile Insurance Losses, Injury Coverages; Claim Frequency Results for 1974, 1975, and 1976 Models,* September 1978.

I 77-1 *Automobile Insurance Losses, Injury Coverages; Claim Frequency Results for 1977 Models,* September 1978.

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I 79-1 *Automobile Insurance Losses, Personal Injury Protection Coverages; Claim Frequency Results by Size of Claim for 1977, 1978, and 1979 Models*, October 1980.

A-1 *Automobile Insurance Losses, Collision Coverages; A Comparison of Results for 1972 and 1973 Models*, May 1974.

A-2 *Automobile Insurance Losses, Collision Coverages; Relationships Between Losses and Vehicle Density, 1972 and 1973 Models*, September 1974.

A-3 *Automobile Insurance Losses, Collision Coverages; A Comparison of Results for 1973, 1974 and 1975 Models*, July 1975.

A-4 *Automobile Insurance Losses, Collision Coverages; Relationships Between Losses and Vehicle Density, 1974 and 1975 Models*, December 1975.

A-5 *Automobile Insurance Losses, Collision Coverages; Relationships Between Losses and Vehicle Body Style, 1974 and 1975 Models*, December 1975.

A-6 *Automobile Insurance Losses, Collision Coverages; An Investigation of Relationships Between Losses and Engine Specifications, Using 1973 Models*, June 1976.

A-7 *Automobile Insurance Losses, Collision Coverages; Annual Increases and Seasonal Variations, 1972, 1973, 1974 and 1975 Models*, June 1976.

A-8 *Automobile Insurance Losses, Injury Coverages; A Preliminary Comparison of Results from Volkswagen Rabbits with Passive and Active Seat Belts, 1975 and 1976 Models*, June 1977.

A-9 *Automobile Insurance Losses, Collision Coverages; A Comparison of Collision Claim Size Distributions for 1974, 1975, and 1976 Models*, November 1977.

A-10 *Automobile Insurance Losses, Injury Coverages; Comparisons of Claim Frequencies of Volkswagen Rabbits with Automatic and Manual Seat Belts, 1975, 1976, and 1977 Models*, June 1979.

A-11 *Automobile Insurance Losses, Collision Coverages; The Consistency of the Loss Experience of Specific Vehicles Produced in Several Years, 1975 To 1978 Models*, June 1979.

A-12 *Automobile Insurance Losses, Collision Coverages; An Assessment of the Effects of the Federal Safety Bumper Standard on the Losses for 1972 Through 1978 Models*, June 1980.

T79-1 *Automobile Insurance Theft Losses by Make and Series, 1979 Models*, June 1980.

T80-1 *Automobile Insurance Theft Losses by Make and Series; 1979 and 1980 Models.* April 1981.